AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier. Those claims not cancelled or withdrawn but amended by the current amendment utilize the following notations for amendment: 1. deleted matter is shown by strikethrough; and 2. added matter is shown by underlining.

1-18. (Canceled)

Please add the following new claims:

19. (New) An authentication method of at least one client entity by an authentication entity, the authentication entity comprising a set of secret keys, each secret key associated with a client entity identifiable by the authentication entity, the method comprising the following steps:

a - transmitting an anonymous authentication request from a part of the client entity to the authentication entity;

b – sending, from the authentication entity to the client entity, an authentication counter value corresponding to a current state of a counter of the authentication entity;

c - verifying, at a client entity side, that the authentication counter value received is strictly greater than a counter value stored by the client entity;

d - calculating, at the client entity side, a counter signature by applying a cryptographic function shared by the client entity and the authentication entity, wherein the authentication counter value and a secret key associated with the client entity are operands;

e - transmitting the counter signature to the authentication entity;

f - updating the counter value stored by the client entity with the authentication counter value;

g - searching, at an authentication entity side, for at least one identifiable client entity for which a corresponding counter signature for the authentication counter value is coherent with the counter signature received; and

h - increasing the authentication counter.

20. (New) The authentication method of claim 19, wherein steps b) to h) are reiterated at least once to verify that the client entity identified is identical at each iteration.

21. (New) The method of claim 19, wherein the step of searching further comprises:

i - calculating, for each identifiable client entity, the corresponding counter signature by applying the cryptographic function with the authentication counter value and the secret key associated with as operands to compile a list of identifiable client entities and corresponding counter signature couples, for the counter value; and

j - verifying coherence between the counter signature received and at least one counter signature of the list.

22. (New) The authentication method of claim 21, wherein the list of identifiable client entities and corresponding counter signature couples compiled for a given authentication counter value is ordered, at the authentication entity side, according to the value of the counter signature.

23. (New) The authentication method of claim 21, wherein in a case of coherence between the counter signature received and the counter signature of a plurality of couples, steps b) to h) are reiterated until a single couple is obtained for which the counter signature corresponds to the counter signature received.

24. (New) The authentication method of claim 23, wherein, during reiteration of step i), the counter signature is calculated solely for the client entities corresponding to the plurality of couples determined in the preceding iteration.

25. (New) The authentication method of claim 21, including implementing step i) as anticipated relative to an authentication request from a client entity at step a), wherein anticipated step i) comprises

pre-establishing, at the authentication entity side, at least one authentication counter value to come, the list of identifiable client entities and corresponding counter signature couples for each of the authentication counter values to come, and

storing the pre-established lists at the authentication entity side, wherein any sending from the authentication entity to the client entity of an authentication counter value corresponds to sending an authentication counter value for which a list of identifiable client entities and corresponding counter signature couples has already been pre-established.

26. (New) The authentication method of claim 19, wherein step h) includes increasing the authentication counter by a fixed rate.

27. (New) The authentication method of claim 19, wherein step h) includes increasing the authentication counter by a random rate.

28. (New) The authentication method of claim 19, wherein, in response to an authentication request, step b) comprises

sending, at the authentication entity side and in addition to the authentication counter value, a random value associated with the counter value, wherein the random value is different for each of the authentication counter values sent, and wherein each step of counter signature carried out during the method is replaced by a signature step of the authentication counter value and associated random value couple, including application of the cryptographic function further comprising the associated random value as operand.

29. (New) The authentication method of claim 19, wherein step c) includes verifying that the difference between the received authentication counter value and the stored counter value by the client entity is less than or equal to a predetermined value.

30. (New) The authentication method of claim 19, wherein, with step c) not being verified, the following intermediate steps are implemented:

sending the counter value stored by the client entity from the client entity to the authentication entity;

sending a temporary authentication counter value greater than the counter value stored by the client entity from the authentication entity to the client entity, then:

implementing steps d) to g) on the basis of the temporary authentication counter value and, in the case of success of authentication of the client entity,

updating the authentication counter value corresponding to the current state of the counter of the authentication entity with the temporary authentication counter value, and executing step h).

31. (New) The authentication method of claim 19, wherein step e) includes transmitting the authentication counter value in addition to the authentication entity.

32. (New) The authentication method of claim 19, wherein the authentication counter value is coded on at least 128 bits.

33. (New) A client entity comprising means for storing a secret key and executing the method of claim 19.

34. (New) The client entity of claim 33, comprising a chip card.

35. (New) The client entity of claim 34, wherein the chip card comprises a contactless chip card.

36. (New) An authentication entity of at least one client entity, comprising a chip card reader including means for executing the method of claim 19.

37. (New) The authentication entity of claim 36, wherein the chip card reader comprises a contactless chip card reader.